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MARYLAND MEDICAL JOURNAL

A WEEKLY JOURNAL OF
MEDICINE AND SURGERY

A. F. SCHULZ BALTO

VOLUME XXXVI. NO. 14
WHOLE NO. 825

BALTIMORE, JANUARY 16, 1897.

\$3.00 A YEAR
10 cts. A COPY

THIS JOURNAL IS ENTERED AT THE POSTOFFICE AT BALTIMORE, MARYLAND, AS SECOND-CLASS MATTER.

CONTENTS.

ORIGINAL ARTICLES.

- The Etiology of Infantile Convulsions. By
Frank Dyer Sanger, M. D., Baltimore. . . 235
Personal Experience with Laryngeal Diph-
theria. By Wm. T. Watson, M. D., Balti-
more. . . 241

SOCIETY REPORTS.

- Clinical Society of Maryland. Meeting held
November 20, 1896. Osteomata of the Audi-
tory Canal. Panophthalmitis of Obscure
Origin in an Infant Nine Months of Age.
Personal Experience with Laryngeal Diph-
theria. . . 247

EDITORIAL.

- The Faculty Library. 252
A Bureau of Diets. 253

MEDICAL ITEMS. 254

BOOK REVIEWS. 255

CURRENT EDITORIAL COMMENT. . . 255

PUBLISHERS' DEPARTMENT. . . . 256

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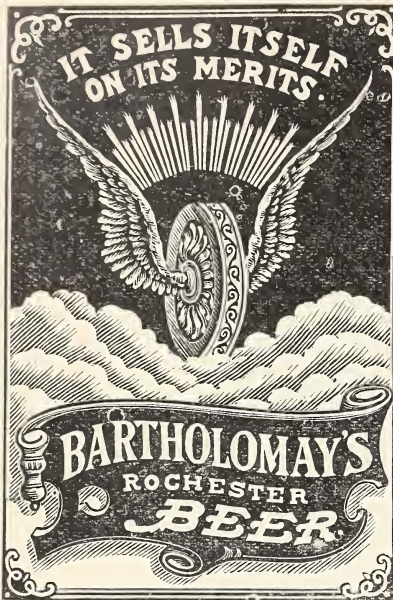
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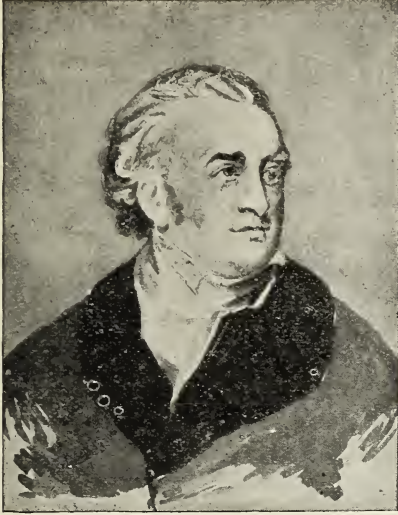
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NOTE ON INFANTILE SCURVY.

BY

JOSEPH LEIDY, JR., M. D., PHILADELPHIA,

ONE OF THE PHYSICIANS TO THE PENNSYLVANIA HOSPITAL AND INSTITUTION
FOR FEEBLE-MINDED CHILDREN, ELWYN.

CASE II. The following notes are of a case in private practice and one which was under constant observation :

R. D., age eleven months, of healthy parentage, one of three children, came with the history of having Rheumatism. The symptoms were entirely referable to the lower extremities, which were painful to the touch, though no evidence of swelling could be detected. When the soles of the feet were pricked the child would make partially successful efforts to draw the limb up ; pressure along the femur or over the knee-joints occasioned considerable pain. Petechial spots were present over both tibia and on the *lower* gums. There was slight anemia. Heart and lungs negative; bowels loose. As the patient was upon sterilized milk, the diet was continued, and in addition, beef-juice and orange-juice ; but little progress was made. At the end of ten days the gums were decidedly spongy, the limbs not at all improved (owing to the tendency to diarrhea), and considerable gastro-intestinal irritation. Pasteurized milk with Fairchild's Peptogenic Powder was substituted for the sterilized milk, in addition to beef-juice and orange-juice, which was continued. Without it were possible to witness the rapid progress toward recovery which this case made, I fear any account would be incredible. Suffice to say, that in four weeks, with the exception of the anemia, the symptoms had entirely disappeared. The patient had regained entire control of the lower extremities, is now increasing in weight, and the anemia rapidly disappearing.

Rheumatism was again the error in diagnosis in this case, and again a point of considerable interest, as well as the rapid amelioration under change of diet rich in fresh food. This child had been brought up on sterilized milk. Of the nine cases which I have had an opportunity of studying personally, six were fed upon one of the proprietary infant foods, three upon sterilized milk—all bottle fed.

Excerpt from *Boston Medical and Surgical Journal*
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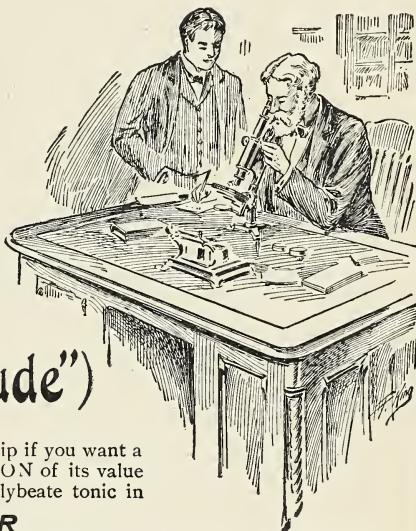
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MARYLAND MEDICAL JOURNAL

A Weekly Journal of Medicine and Surgery.

VOL. XXXVI.—No. 14. BALTIMORE, JANUARY 16, 1897. WHOLE No. 825

Original Articles.

THE ETIOLOGY OF INFANTILE CONVULSIONS.

READ BEFORE THE CLINICAL SOCIETY OF MARYLAND, NOVEMBER 6, 1896.

By Frank Dyer Sanger, M. D.,

Physician in Charge Nursery and Child's Hospital, Baltimore; Demonstrator of Anatomy and Associate Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore.

ALL writers upon the subject, and all statistics bearing upon convulsions in early life, point to one etiological factor of special prominence, and one it seems to me of peculiar significance. The fact that convulsions are much more frequent during the period of infancy, more than twice as many as shown by Lewis' tables occurring during the first year of life, as occurring during the entire twenty years succeeding.

Jamison's tables indicate that there are two periods of frequency, viz.: The first month of life, and the period from six months to two years. Nearly all observers agree that the majority of convulsions occurring under one month of age occur soon after delivery and are the result of accidents incident to labor, or to congenital deformities. They are here a concomitant of death when post-mortem investigation will prove them to be symptomatic. In case death does not occur, the appearance later of spastic paralysis, or other manifestations, points back to a lesion, usually a meningeal hemorrhage, and places these cases as well on the list of symptomatic convulsions.

A large per cent. of convulsions occurring after the first month—I might say after ten days—are not due to

organic lesions, and it is to these that I wish to direct attention. The question which arises naturally is, why are convulsions more frequent under two years of age?

We have been accustomed to explain the fact on the ground of peculiarities in the nervous system at this period of life, nearly all existing theories being based upon or taking cognizance of peculiar instability of the nervous tissues, either in the direction of greater reflex excitability of centers or an undeveloped control of higher cerebral mechanism. But while it is generally conceded that instability of the nervous tissues plays an important part in the production of convulsions the instability of other tissues and organs, which is also peculiar to the period of infancy, seems hardly to have been considered.

What the nature of the nerve reaction is, which results in a convulsion, seems yet in doubt. There is even uncertainty in the minds of some as to the location of the cells concerned in this nerve reaction, Nothnagel's view of a "convulsive center" in the floor of the fourth ventricle being quoted and re-quoted from article to article by the various writers upon the subject.

It would seem, since a spasm is but a form of motion, and since motion is

the reaction of a motor cell, that motor cells anywhere might be concerned in a convulsion and that the same laws determining localization of motor centers apply, whether the nerve reaction observed be an ordinary muscular contraction or a spasm. It is difficult to understand the philosophy of a convulsion center in the fourth ventricle floor.

The recent investigations upon the nervous system, startling as have been their revelations regarding the histogenesis of the nerve cell, and deeply as they have penetrated the labyrinthine paths of the brain, have not, so far as I am aware, thrown any light whatever upon the nature of the nerve reaction in a convulsion. But investigations along other lines have pointed out certain conditions which will produce this nerve reaction. We can even go further and say that we know the antecedence of these conditions.

It is pertinent, therefore, that we should, while accepting the part played by an unstable nervous system (which instability be it said is founded on anatomical and physiological fact) leave this part of the subject and examine the conditions which, acting upon more stable nerve centers in the adult, are known to produce the nerve reaction which results in spasm, with the view of determining whether the same or similar conditions are not a concomitant of young life, dependent perhaps upon instability of tissues and organs, having an anatomical and physiological foundation, and being jointly responsible with the nervous system for the convulsive seizure.

We know that the organism in health, as well as in disease, is a recipient of and a generator of poisons; that certain mineral poisons, for instance, are continually introduced into the economy with the food; that substances useful to the economy, if they accumulate, or even if they become markedly deficient, are harmful. As for example, a marked variation in so simple a substance as water by perverting osmosis, impoverishing cells by the excessive abstraction of dialyzable material, or choking them by its accumulation, and thus

altering their entire chemistry, brings about dire results. We know that the secretions of the body are toxic, having a toxicity beyond the ferments which they contain—saliva for example; that in the process of digestion, as a by-product of the transformation of albuminous substances into peptones, alkaloidal poisons are produced; that in the alimentary tract as a result of decomposition which may arise from the organisms habitually there, as well as from infection with organisms from without, toxic material is produced.

We are aware that fortunately a large proportion of the poisonous material produced in the alimentary tract is eliminated with the stools. A certain amount is, however, absorbed and would constitute a menace to the economy were it not for the power of the liver to destroy or neutralize the poisons and pour them back into the intestinal tube.

Those poisons resulting from cell changes in tissues outside the intestinal tube find their way into the blood stream, and it would seem from the researches of Hoffmeister that the white globules play an important part in the neutralization or transformation of these.

While the greater amount of poison generated in the intestinal tube is eliminated with the stools, and while much that is taken up by the portal system is rendered harmless by the liver, Heeger, Shiff and Roger in Bouchard's laboratory have shown that the liver does not destroy all the toxic material coming to it by the portal vein. The blood stream, therefore, is the recipient of all the poison elaborated in the tissues and that from the intestinal tube not cared for by the liver. We have said that the blood itself may contain elements acting upon poisons in it, viz.: Hoffmeister's white globules. But the safety of the organism depends upon the integrity of the swift carrier which conveys these poisons to their proper emunctories, namely, the skin, lungs and kidneys, and upon the functional activity of these organs.

The importance of the carrying power of the blood is illustrated by the accidents following severe hemorrhage.

Brown-Séguard, I think, rightly considers the convulsions produced by hemorrhage to be identical to those caused by asphyxia and due to the retention of carbonic acid, one of the chief among toxins and one for which the nervous tissues are least tolerant. It should be noted that Kirk and others believe convulsions in this condition are due to lack of oxygen rather than excess of carbon dioxide.

All this is a matter of well-known physiology. Let us now ignore for the time being the skin and lungs as eliminating organs and turn our attention to the kidney and the urinary secretions.

We are dependent almost wholly upon the researches of Bouchard, who has shown what substances in the complex urinary secretion are toxic, though the toxicity of urine as a whole has been known since the experiments of MM. Feltz and Ritter in 1880.

Bouchard by separating the constituents of urine has disassociated its various poisons and shown that it contains at least seven toxic substances, viz.:

I. A diuretic substance which he has shown to be urea, the toxicity of which is much lower than certain of the other constituents, hardly equal to the most inoffensive salt. Hence in the complexity of symptoms thought by Wilson to be due to the retention of urea, and epitomized under the term uremia, urea is one of the least important poisonous factors. In fact it would seem that the danger lay in a deficiency rather than an excess of this substance, since it is the urea which is capable of forcing the kidney barrier and thus carries away other greater poisons.

II. A narcotic substance the nature of which is unknown, though it is supposed to be organic.

III. A sialogenous substance also unknown and also probably organic.

IV. A convulsive substance, probably organic, possibly an alkaloid. It is present in less quantity in the day urine than in that which is secreted at night. It is extremely rapid in its effect.

V. A substance contracting the pupil, fixed, organic, not in all probability

mixed with the preceding, for all normal urines contract the pupil, but very few induce convulsions.

VI. A substance which reduces heat by reducing heat production. It is also organic, perhaps a coloring substance. It is individual.

VII. Another convulsive substance, inorganic, which has been shown to be potassium.

The clinical picture of uremia as it is seen in adult life is not then painted by the one ingredient urea, but by a number, and the variations in the picture depend upon the variable admixture of these elements which in time results from variations in their production in these neutralizations, as well as their elimination. Furthermore, it seems probable that they may have a mutually neutralizing effect. In other words, that urine contains physiological antidotes to certain of its poisons. As for instance the narcotic poison antagonizing the convulsive poison and *vice versa*.

Since the various phenomena observed in uremia are the result of the retention in the economy of the various poisons normally gotten rid of through the kidney, and since these phenomena are observed individually, collectively or in variable combination dependent upon the poison which is predominant, it is necessary in order that one or more of these accidents making up the clinical picture of uremia should occur, that either there shall be an over-product of one or more poisons beyond the capacity of the destructive or elimination mechanisms, or else a deficiency on the part of these mechanisms. Nor is it necessary for the kidney to be diseased. It is quite sufficient that the toxic material in the blood at a given time should exceed the activity of this emunctory.

This is unstable equilibrium. Are there any conditions in young life tending to produce it?

The period of life from birth up to the end of the second year is characterized by a struggle for the establishment of equilibrium. The various tissues and organs are still in a developmental state. There are striking peculiarities, anatomical and physiological, for instance, in

the whole digestive tract, which are being adjusted.

Let us consider some of these. The salivary secretion requires some time for its establishment and its active principle ptyaline does not appear until the third or fourth month.

Traube and Escherich have shown that the stomach is less important than the intestine in digestive processes. From an organ containing about one ounce in capacity, it quadruples in four months. The pepsin and hydrochloric acid are present in its secretion; little digestion is accomplished here except coagulation of milk. There is little absorption, and since its secretion is but feebly antiseptic, it is an ideal place for the development of bacteria. Hoffmeister and Tappin have shown that the stomach does not absorb soluble material as readily as the intestines.

Korowin has shown that the diastatic ferment in pancreatic secretion is not present, except in traces at the end of the third month; and is not in full power until the end of the first year.

Zweifel shows that the proteolytic action of pancreatic juice is relatively active in young infants. Absorption of fat is ready because of the well developed glandular tissue in the intestine.

Dastrex has shown that milk sugar is digested by a living ferment in the small intestines.

Beneke's work on the alimentary tract at different periods of life shows that the length of the tract compared to the length of the individual is relatively greater in children.

In new-borns, 570 to 100; at two months, 660 to 100; at seven months, 510 to 100; at thirteen months, 470 to 100.

The liver is relatively large. Its size is in harmony with great nutritive and metabolic activity of this period, but its growth is relatively smaller than that of the child. The heart is relatively large.

In infancy the volume of the heart is to the size of the aorta as 25 to 20; at puberty as 140 to 56; and after puberty, as 290 to 61. (See article on Anatomy of Children, Cyclopaedia of Diseases of Children, first volume.)

The post-fetal growth in arteries is smallest in the carotids, largest in the femoral and renals. The renals grow more rapidly than the kidney itself and the kidney is less permeable in the child. These facts probably account for the frequency of kidney diseases in young life.

The quantity of blood is less in the child in proportion to the body weight, being one-nineteenth in the child, and one-thirteenth in the adult.

Adjustment is the order of the day and presupposes instability.

The fact that the infant is not so well protected against the invasion of micro-organisms and the fact that exposure to infection is much more frequent accounts for the commonness of infectious processes, which in turn play an important part in auto-intoxication.

It seems, therefore, extremely probable that convulsions in early life may be in many instances manifestations of auto-intoxication; that there are two primal conditions underlying:

I. Instability of nervous tissue, which predisposes to convulsion reaction.

II. Instability of metabolism generally, which may lead to an excess of poisonous materials in the blood, which acting upon predisposed nerve tissues, gives the convulsive more reaction. The question very naturally arises: If instability of metabolism produces the convulsive accident, why are not the other toxic results observed? It is not sufficient to say that the nervous tissues are perhaps less disposed to the nerve reactions which result in narcosis or diuresis, etc., than to the convulsive reaction.

Let us answer those questions by asking a few.

Who has not observed the great variation in the quantity of urinary secretion, particularly in strumous, lithemic children?

Is the variation in salivary secretion apparent rather than real, observed because the child has not learned to keep the mouth shut; and is the flow which seems excessive at times due to the reflex irritation from the gums?

Is contraction of the pupil common? I have not observed it to be so, but may

it not go unobserved a hundred times—yes, would it not be a thousand times more apt to go unobserved than a convulsion?

It is hardly necessary to ask who has not observed narcosis. I go into a play room where twenty children are holding high pandemonium, and find a child asleep on the floor. He is stupid, his tongue coated and breath offensive; he may or may not have temperature; we put him to bed and give him a brisk cathartic; in a few hours he has joined the riotous assemblage of his companions and is as lively as any of them. He who has not seen a child stupid from simple indigestion may at least have felt dull himself from constipation.

Is sub-normal temperature a unique thing in children? Far from it. It is not only a common thing, but a dangerous thing. It is associated with a depressed circulation. What is the relation between them, and if the depressed circulation is causative, what in turn has caused it?

Convulsions are known to occur in a great many different conditions in children. What proportion of them can be explained on the ground of auto-intoxication? Take rachitis. We have not decided whether rachitis results from a nutritional disturbance or not, but we do know that they are associated invariably, and nutritional disturbances lead to auto-intoxication. Improper feeding, indigestion, gastro-intestinal disorder of all sorts, may give rise to convulsions through auto-intoxication.

Auto-intoxication most readily explains the convulsions occurring in the acute infectious fevers. In this view I am joined by Chenbach and many others. They are most apt to appear early in those infectious diseases which come on suddenly with a symptomatology of an aggravated type in smallpox, for instance, or scarlet fever. But they do not continue.

They most frequently disappear when the disease is well established, but their disappearance is not usually accompanied by a subsidence of other symptoms. What does this mean? Simply that the onset of the disease has been so sudden

that the organism has for the time being been overpowered. If death does not occur in the first charge and the circulatory and the emunctory powers of the organism rally, though the fight goes on, the convulsive stampede is checked. When the onset is more gradual, as in measles for instance, and the forces are not so severely stormed, so to speak, the organism is able to hold its own and the convulsive stampede does not take place. Late convulsions in the course of infectious processes mean a new charge in the line of a complication; broncho-pneumonia in measles, for instance.

The comparative rarity of convulsions in typhoid fever simply corresponds with the comparative infrequency of that disease under two years of age.

Early convulsions in lobar pneumonia are common. Lobar pneumonia, by the way, is much commoner under two years of age, as pointed out by Holt, than was formerly supposed. I have had a number of opportunities of observing it.

A convulsion is to a child often what a chill is to an adult, taking the place of the initial chill, as we have seen in acute infectious processes. It quite as frequently takes the place of a chill in intermittent fever. We know that important events in the blood stream coincide with the chill. Is the toxicity of the blood suddenly increased by these events? I do not know.

As yet we do not know whether the malarial parasite produces a toxine. Brousse, Roque and Lemoine have shown an increased toxicity of urine just after an attack and Queirolo has shown that the sweat collected during the sweating stage is much more toxic than that taken under other circumstances. The increased urinary toxicity may be accounted for according to Botazzi and Penzute by the increased excretion of potash salts, urobilin, as well as by the presence of peptone.

Convulsions never usher in whooping cough. They rarely occur in uncomplicated pertussis. They are most commonly seen when broncho-pneumonia (the most frequent complication) develops. I saw but one convulsion among fifty-two cases of unusual severity in in-

fants, nearly all under one year of age and most of them artificially fed, though the fatality was large. Lewis thinks that the cause of convulsions in whooping cough is threefold.

I. The nervous element which is an integral part of the whooping cough.

II. The high fever which often accompanies severe cases.

III. The venous condition of the cerebral circulation, due to the severe paroxysms of coughing, or to the pulmonary complication, or to both.

If the nervous element (?) is a factor of importance, we should see more convulsions in uncomplicated whooping cough.

It is doubtful whether high temperature unassociated with infection or intoxication will produce a convulsion unless suddenly raised to a high degree.

If the venous condition of the cerebral circulation means anything, it means carbonic acid intoxication.

Anger or other strong emotions in a nursing mother have been followed by convulsions in the child; due probably to some change in the chemistry of the milk rendering it toxic. The time occupied in accomplishing this transformation is astonishingly short.

May not fright or strong emotion in the child temporarily increase the toxicity of some of its fluids?

The reflex origin of convulsions has been an easy explanation, which has been carried far beyond the vanishing point of possibility. It has been all things to all men. To the oculist—eye-strain; to the nose and throat specialist—some slight trouble in the nasopharynx; to the surgeon—an adherent prepuce; and to the general practitioner—dentition or gastro-intestinal irritation have been ready means of accounting for spasms. Exciting causes are so intricately interwoven with fallacy that they should be examined critically.

We have been finding out of late how common eye-strain is among Baltimore school children. Adherent prepuces are not quite as common as foreskins, but infinitely more common than the sum total of spasms in my experience.

Normal dentition does not result in anything but teeth. I believe with Jacobi and Kassowitz that convulsions resulting from difficult dentition are extremely rare.

Some one has said that the frequent lancing of gums proves the frequent absence of diagnosis and the ready tribute paid to the prejudices of past centuries and the female population.

Difficult dentition means pain, if it means anything, and we are all familiar with the depressing influences of pain (especially when long continued) on appetite and digestive processes.

The gastro-intestinal disturbances so frequently associated with painful dentition result from this depressing influence, and their relation to convulsions has been already noted. This association, though not a close one, is much more satisfactory than that the trifacial conveys a protest to a group of cells (perhaps in the fourth ventricle floor), which manifest their indignation by throwing the whole body into a fit.

It will be observed that I have not considered the convulsions occurring in organic diseases of the nervous system. The so-called "symptomatic convulsions," a bad term, since the convulsions herein treated are but symptoms.

In closing permit me to offer the following conclusions.

I. Convulsions are most frequent under two years. There are two periods of frequency, under one month and between six months and two years.

II. The nature of the nerve reaction resulting in a convulsion is not understood, but it is probable that instability of nervous tissues at this period of life favor this reaction.

III. Convulsions are frequently observed in adult life and result from auto-intoxications and other causes.

IV. Convulsant substances may be introduced from without or generated within the economy.

(a) Substances useful to the economy if they accumulate become harmful—for instance, water, carbonic acid, mineral substances, the salts of biliary acids, soluble ferments, toxins not ferments in saliva, alkaloids of secretion in urine.

(b) Infectious agents may elaborate toxins.

(c) Organisms constantly present in the economy under certain circumstances may become infectious agents.

V. The instability of all the organs and tissues of the infant economy makes auto-intoxication common.

VI. Convulsions occurring in rachitis and diseases associated with great nutritional disorders; all forms of gastro-intestinal disorders; the acute infec-

tious fevers are most readily explained on the ground of auto-intoxication.

VII. Convulsions resulting from marked disturbances in the respiratory and circulatory system, as for instance asphyxia and hemorrhage, are in all probability toxic.

The reflex origin of convulsions is probably not common. It should, however, be noted that when the so-called convulsive habit is established reflex disturbance may bring on a spasm.

PERSONAL EXPERIENCE WITH LARYNGEAL DIPHTHERIA.

*By Wm. T. Watson, M. D.,
Baltimore.*

READ BEFORE THE CLINICAL SOCIETY OF MARYLAND, NOVEMBER 20, 1896.

ALTHOUGH my experience with laryngeal diphtheria has been a very limited one, yet I venture to present it to you for the reason that the subject, however much it has been discussed elsewhere, has not been brought before the Clinical Society for at least five years, during which time the treatment of the malady has undergone a most momentous change. I trust that this brief clinical report may be the means of eliciting profitable comment from some of the older members of the Society whose experience is larger and runs back into the pre-bacillus, pre-intubation and pre-antitoxine era.

On August 7, 1893, a little over three years ago, I first made the acquaintance of membranous croup and have ever since had a profound respect for it as a foe with which to battle, although, happily, with modern scientific aids, I feel my ability to conquer in the large majority of instances.

At 2 o'clock in the afternoon of the date mentioned I was called to see A. K., a plump little boy of 18 months. He was quite hoarse and his respiration showed symptoms of laryngeal stenosis. There was no membrane to be seen in the throat; the temperature was not high and the pulse was good. I prescribed an emetic to be followed by cal-

omel at short intervals. At 8 p. m. the child's respiration seemed slightly improved. I tried to impress upon the parents the necessity of sending for me immediately if the breathing became worse during the night. I was summoned at 8.30 the next morning, only to find my patient dead upon my arrival. I asked why I had not been sent for sooner. The father replied that he thought I knew my business and that I would have called during the night had there been much danger. I was told that another child had had the same disease two years before and two doses of Doctor C.'s medicine had completely cured it. I explained the difference between true and false croup, and I made the father acknowledge that he had promised to send for me in the night if there was any change for the worse; but with little satisfaction to either of us. I left, indignant that a life should have been lost and my reputation injured through the ignorance and negligence of the child's parents. I took no blame to myself, but still the case furnished much food for reflection and, when later on, another case came under my notice, I left nothing to the judgment of the parents.

And now, after the lapse of time, and with experience in other cases, I am

forced to the conclusion that the death of my first patient was due more to the inexperience of the physician than to the ignorance of the parents—inexperience not so much in the possibilities of the disease as in the extent to which the laity are to be trusted to make observations in critical cases. The child should have been intubated at my second visit, or else I should have visited it at intervals during the night. I can confess my shortcomings in this case the more freely because I am sure that my other patients have benefited by my early mishap.

My next case was that of Joey Noark, aged 5 years and 10 months. He had been croupy for a day or two before I saw him on October 9, 1894. I watched him closely for nearly twenty-four hours, during which time the symptoms of laryngeal stenosis grew steadily worse. I then called in Doctor Booker, who intubated the child. On the fourth day the tube was removed, but in five or six hours it had to be returned. The tube was coughed up one week later and did not have to be reinserted. The medicinal treatment employed was calomel fumigations. No membrane was seen in this case and no cultures were made.

I saw my next case, Erma Murphy, aged 2 years, on August 19, 1895. She had been hoarse for four days. There was a patch of membrane on one tonsil. A thousand units of Behring's antitoxine were administered about 10 o'clock in the morning. The symptoms of laryngeal stenosis constantly increasing, I called in Doctor Chambers, who intubated at 5 P. M. One week later the tube was coughed up and the child was practically well. The diagnosis of diphtheria was confirmed by culture.

The cases to follow, occurring in the practice of other physicians, as well as in my own, were all intubated by me and so I class them together.

CASE I.—Baby T., aged 10 months. First seen by me about 9 o'clock P. M., October 1, 1895. The symptoms of laryngeal stenosis were quite severe and I intubated at 10 P. M. There was considerable bronchitis present. A large quantity of mucus had been imprisoned

below the glottis; this escaped during intubation. The child was very weak and a grave prognosis was given. Antitoxine, 1000 units of Behring's, was administered, but not until 10 o'clock the next morning. The child died quietly three hours later. The treatment had prolonged life a few hours and changed the mode of death from asphyxia to asthenia. No membrane was discovered but the diagnosis was confirmed by culture.

CASE II.—Baby G., aged 21 months. I first saw this case at twelve o'clock, midnight, October 11, 1895. Its condition was desperate, as the child had been struggling for air for twenty-four hours and more. I intubated at 12.30. The attending physician had given 1500 units of antitoxine at 7 o'clock the previous evening. The stenotic symptoms were for the time relieved and the child fell asleep. Some hours later the dyspnea returned, due, doubtless, to obstruction in the bronchi, and apparently from this the child died. The tube was perfectly clean upon removal. Death occurred at 4 P. M., October 12, fifteen and one-half hours after intubation and about twenty-one hours after the use of antitoxine. No culture was made in this case.

CASE III.—Katie Brown, aged 6 years. She, together with two sisters, had had extensive membrane on the tonsils and pharynx for three or four days, but were all progressing nicely without the use of antitoxine. On November 28, 1895, the fourth day of the disease, word was sent to me that "Katie had taken cold and could not get her breath." I found the symptoms of laryngeal stenosis quite marked and intubated at once. A thousand units of Behring's antitoxine were used two hours later. The tube was removed in one week and the child was well. No culture was made, as it was considered quite superfluous.

CASE IV.—Helen Amberg, 19 months. Was taken sick during the night of January 12, 1896. I saw her early on January 13. A large patch of membrane was present in the pharynx and the respiration was quite hoarse and somewhat obstructed. By noon the

symptoms of laryngeal stenosis indicated intubation, which was done. A thousand units of antitoxine were administered at the same time. Three and one half days later the tube was coughed up and the child was well except for a cough which persisted for a month. Diagnosis confirmed by culture.

CASE V.—Baby Rockstroh, aged 18 months. I saw the child on the morning of January 10, 1896. It had been sick and without nourishment for five days. The mother thought it was teething and would nurse as soon as the teeth were cut. Uvula, tonsils and pharynx were covered with membrane. Breathing was very much obstructed. The pulse was rapid and feeble. I intubated and for the sake of doing something, I administered 1000 units of Behring's antitoxine. The child fell asleep at once and later on took some nourishment, but passed away peacefully about twenty hours later. The diagnosis was confirmed by culture.

CASE VI.—Freddie Shelpert, aged 3 years. I saw this child with Dr. Wm. Corse of Gardenville, in March, 1896. He had a patch of membrane on the pharynx. Was quite hoarse and could only speak in a whisper. His breathing was but slightly obstructed, yet as it was evening and the child lived two miles away from my office and a like distance from his attending physician I thought it better to intubate and I did so. Had the patient lived where I could have watched him carefully, I would not have intubated so early. Intubation did no harm and probably saved a life. A thousand units of antitoxine were administered at the time of intubation. The tube was removed in five days and the child was well. No culture was made.

CASE VII.—Maudie White, aged 5 years. Seen first on June 3, 1896. The clinical picture was that of a typical follicular tonsillitis. I had made so many cultures from similar cases with negative results that I omitted it in this case. Two days later symptoms of laryngeal stenosis appeared. Cultures were then made and diphtheria bacilli demonstrated. Antitoxine, 1000 units,

were administered at 10 A. M. On June 5, at 9 P. M., the symptoms of laryngeal stenosis urgently demanded intubation, which was done. The tube was removed one week later. Recovery was complete.

CASE VIII.—Charlie Reisinger, aged 4 years. I saw this child with Dr. Corse, July 28, 1896. It had been ill with diphtheria for three days; there was membrane present in the pharynx; some symptoms of laryngeal trouble were present for three days and then the signs of stenosis developed so rapidly that its physician feared it would die before we reached it. Intubation was performed and 1500 units of antitoxine administered at the same time. Six days later the tube was removed and the child was well. The diagnosis was confirmed by culture.

CASE IX.—Charlie D. Aged about 4 years. I was called in from the street to this case. The child had laryngeal stenosis and was in need of intubation. I waited about an hour, until word came from its physician that he could not come till late in the day, and then I intubated. In three days' time the tube was coughed up and the child got well. Antitoxine was not used.

CASE X.—Farran boy, aged 4 years. Had been ill two days when laryngeal symptoms developed. They progressed in severity for twenty-four hours, when I intubated, September 11, at the instance of the attending physician, Dr. Crouch. There was much membrane on the tonsils and pharynx and a piece the size of a quarter came from the neighborhood of the larynx during intubation. Antitoxine, 1000 units, was administered several hours previous to intubation. The tube was removed in four days. The child made a good recovery. The diagnosis was not confirmed bacteriologically.

CASE XI.—Carrie Davis, aged 5 years. I was called at noon, September 21, 1896. The child had been hoarse for two or three days. She had considerable dyspnea, but her color was good and strength good. There was a large patch of membrane in the pharynx. In four hours the symptoms of stenosis

were much increased and I intubated. A thousand units of antitoxine were administered at the same time. Five days later I removed the tube and the girl was well with the exception of a harassing cough which lasted for three or four weeks.

CASE XII.—Ida Wooden, aged 4. I saw this patient at 8 P. M., September 23, 1896, with Dr. A. A. Clewell, who had been called to it some four or five hours before. The child had had laryngeal symptoms for four days. Intubation was clearly indicated, but I had not the tube appropriate to the size of the child. I sent for a tube and promised to return in an hour. I would have returned sooner, but both Dr. Clewell and myself thought the child had hours yet to live. When we arrived at the appointed time the household was in confusion. The child was said to have had a spasm and was thought to be dying. What it may have had I know not, but when we saw it it was not breathing and its pulse was feeble and fluttering. The chest heaved slightly a few times, but there was no respiration. The muscles of the body were rather limp, but there was sufficient contraction of the jaw muscles to hold the gag in place. In a minute or two the tube was in the larynx. It was the easiest and quickest operation I have performed; there was absolutely no resistance—it was like operating upon a cadaver. In a few seconds there was a slight respiration, then another, then a slight cough, and then the respirations became stronger and more frequent, but it was a matter of several minutes before the breathing was at all natural. It truly seemed like bringing the dead to life. As the respiration improved the pulse became stronger and steadier, but it was fully half an hour before it became as strong as at our previous visit. Brandy was injected hypodermically at frequent intervals. Fifteen hundred units of antitoxine had been administered at 8 P. M. The child did well and the tube was removed on the seventh day. No culture was made. The membrane was coughed up but none was seen in the pharynx.

CASE XIII.—Hilda D, aged 5 years. I was stopped on the street by the child's father, who said that his child was choking and his regular physician could not be had. I found the child in an almost suffocated condition. Within ten minutes I had secured my instruments and intubated. The child had been sick a day or two. There was a patch of membrane on the posterior wall and quite a large piece came from the larynx during operation. In four days the tube was removed and the child was apparently well. A thousand units of antitoxine were used two hours after intubation. The diagnosis was confirmed by culture.

CASE XIV.—Cora Taylor, aged 3½ years. Seen in consultation with Dr. Athey, October 10, 1896. Dr. Athey called in the morning to see another child in the same house whom he was treating for diphtheria and found this child hoarse and with some signs of obstructed respiration. By noon time, when I saw the case, the symptoms of stenosis were quite severe, having increased rapidly in gravity during Dr. Athey's trip to my office. I intubated at once and a thousand units of Behring's antitoxine were given a couple of hours later.

October 12, two and one-half days later, the child's respiration rose to 60 and there was great restlessness. The temperature was 102°. Pneumonia was suspected, but a very careful physical examination gave no evidence of it. I then feared that the caliber of the tube might be lessened by deposit and to make sure removed it. The tube, however, was perfectly clean. In ten minutes time the dyspnea became so intense that I had to put in the tube with great haste. We then concluded that the quickened respiration must be due to the diphtheritic poison and so administered 1500 units more of antitoxine. In five hours time the respiration had dropped to forty per minute and then steadily declined to normal.

October 18, eight and one-half days after the first intubation, the temperature and respiration being normal, I again removed the tube. In three-quar-

ters of an hour I was forced to replace it on account of the urgent dyspnea.

October 22, twelve and one-half days after the first intubation, the respirations rose to 42 per minute and there was great dyspnea. The tube was removed and found to be nearly occluded with a grayish-white granular deposit. The tube remained out from 11 P. M. till 12.30 (one and one-half hours) but had to be finally replaced.

October 26, sixteen days after the first intubation, the child was doing nicely as far as respiration and temperature was concerned, but she positively refused to take milk or beef tea and would take but sparingly of egg albumen. She had fallen off in weight, probably from lack of nourishment. I again removed the tube. Its removal was followed by a violent cough which lasted for three or four hours with but little intermission. She coughed on expiration and the inspiration was very much obstructed. Believing that the obstruction to respiration was due to laryngeal spasm caused by the same irritation which excited the cough, we gave the child paregoric to the extent of two drachms and also five grains of chloral. When she came under the influence of these remedies respiration was much freer and the cough subsided. Opium was administered at regular intervals to allay irritation but nevertheless the dyspnea returned and after the lapse of thirty-one hours the tube had to be reinserted.

From this time, for some reason unknown, the child took nourishment in larger quantities and became much stronger. Finally, on November 1, twenty-two days after the original intubation, the tube was removed and the child breathed quite smoothly. After a few hours it became hoarse again and has remained hoarse ever since. A week after the tube was removed, on a cold, damp day, symptoms of stenosis again showed themselves and by midnight were so severe that we feared another intubation might be necessary. Fortunately, the symptoms abated and the operation was averted. Eight days later, November 16, the child was ap-

parently well in the morning, except for a little hoarseness and a slight cough. By 10 o'clock at night she had a temperature of 103.8°, with respirations 54. Respiration was very noisy, but there was but little dyspnea. The following day the temperature was 102.5°, respirations 30, and she had a profuse urticarial eruption over the whole skin surface. On the next day her temperature was normal and has remained so ever since.

The mucus expectorated has had a very slight amount of blood in it at times ever since the removal of the tube. No culture was made from the pharynx in this case. One was made from the saliva which escaped from the mouth at the first intubation and proved negative. The material taken from the obstructed tube, twelve and one-half days later, gave practically a pure culture of streptococci; no diphtheria bacilli. I have but little doubt that at the first we had to deal with a mixed diphtheria and streptococcus infection and, in a few days, the diphtheria element dropped out, leaving a streptococcus inflammation which will get well in its own good time uninfluenced by treatment.

CASE XV.—Joseph Kanaur, aged 3½ years. This boy I saw with Dr. Corse at 10 o'clock on the morning of October 21. He had been ill for three days before a doctor was called. He had membrane on the uvula and on both tonsils. The signs of stenosis were severe and I intubated at once. He took a couple of inspirations but was unable to expire. He became cyanosed immediately. I hurriedly withdrew the tube by means of the string attached. A piece of membrane 2 inches long and ½ inch wide came with the tube, ¼ inch of it being firmly wedged in the lower end of the tube. Respiration was somewhat improved but it was deemed best to replace the tube. Seventeen hours later the tube with some membrane was coughed up. It was allowed to remain out five hours and then replaced. Seven hours later the tube, together with some membrane, was again coughed up. It was replaced in three hours. It remained in the larynx this

time for thirty hours, when, occluded with membrane, it was expelled, and did not have to be reinserted. It was doubtless a fortunate circumstance that the tube in this case was a little loose otherwise a fatality might readily have occurred from its obstruction. Antitoxine (1000 units Behring's) was administered after the first intubation. The diagnosis was confirmed by culture.

CASE XVI.—Jimmie Murtagh, aged 2½ years. First seen at 8 P. M., October 30, 1896. Had been ailing five days, with hoarseness for one day. Membrane was present in each nostril, on the uvula and on both tonsils. Stenotic symptoms were present. At 10 o'clock 1000 units of Behring's antitoxine were used. Having seen the case comparatively early, so far as the laryngeal symptoms were concerned, I hoped that intubation might be averted by the use of antitoxine, but by 3.30 in the morning the stenosis was so severe that I felt it my duty to intubate. In three and a half days the nose and throat were perfectly free from membrane and I ventured to remove the tube, hoping that the laryngeal deposit had likewise disappeared. A piece of membrane the size of a dime was coughed up in a short time. In half an hour the tube had to be returned. It was finally removed eight and a half days from its first insertion. The child is well. The diagnosis was confirmed by culture. I am indebted to Dr. Wm. Royal Stokes, the City Bacteriologist, for the bacteriological work in the last four cases, and to Dr. George Blumer for assistance in the other cases.

After antitoxine was injected no other treatment whatever was employed. The nourishment has always been liquid and given by the mouth. Nasal feeding was contemplated in the case of Cora Taylor, but as she was a very intractable child it was postponed and finally dispensed with. Pneumonia has not been a complication in any case, neither has there been any paralysis nor unfortunate sequelae of any kind. The dosage of antitoxine in several cases, while seemingly efficient, was below that recommended by the best au-

thorities and lower than I shall use in the future. I have seen no case of laryngeal diphtheria where the use of antitoxine averted the operation of intubation.

Since the introduction of the antitoxine treatment I have seen seventeen cases of laryngeal diphtheria, all requiring intubation. Fourteen have recovered, giving a mortality of 17.6 per cent. The three cases which died were all considered desperate from the first moment I saw them; all in an exhausted condition. One died within three hours of receiving the antitoxine and the others within twenty-one hours.

In one of the recovered cases no antitoxine was used. How far the remedy influenced the results in the other thirteen cases can not of course be known with certainty; but, when we learn from O'Dwyer that in his last seventy cases of intubation without antitoxine he had fifty-one deaths, or a mortality of 73 per cent., and when we remember that the very best results ever obtained from intubation without antitoxine (those of Brown) gave a mortality of 51.6 per cent. in 299 cases, we must believe that some new influence has been at work in these instances. I might still think that perhaps I had fallen upon a series of fortunate cases were not my results very much the same as those of other physicians in private practice, as shown by the recent investigation by the American Pediatric Society. The report of this Society, as you are all doubtless aware, gives a list of 533 intubations with a mortality of but 25.9 per cent. It is interesting to note that almost this same percentage (26.77) was given by Northrup in 1888 not as the rate of mortality but as the rate of recovery.

While several of these cases might have recovered without the use of antitoxine, probably not one would have survived without intubation, and I would here make the point that it is the general practitioner and not the specialist who should do the intubating. Eight of the cases mentioned in this paper have occurred in my own practice, five of them within a year. Of the five

which I intubated probably not one would have died before I could have secured assistance, but certainly in one case the child's powers of resistance would have been seriously impaired before the specialist arrived and the ultimate result might not have been so fortunate. But it is not so much from my own experience that I make this statement as from that of others. On two occasions recently I have been called by medical friends to intubate cases for them but found the children dead upon my arrival. In another instance had the attending physician the means of removing an obstructed tube a life might have been saved. In some of the country districts I know that the diagnosis of membranous croup is equivalent to a death sentence.

These cases, in my experience, have the faculty of occurring in the families of the very poor. One hesitates to trespass upon the time of the surgeon or specialist when there is no hope of his receiving his just reward and through such hesitancy I am sure that the lives of many children are lost which might be saved were the general practitioner qualified to operate.

I wish, in conclusion, to express the profound satisfaction that I have felt in the treatment of these few cases of membranous croup. After treating measles and scarlet fever, pneumonia and typhoid, and the many other maladies which get well, we hope, because of our treatment, or die regardless of our treatment, it is a source of pleasure to the general practitioner to meet with a class of cases in which his timely aid, beyond the shadow of a doubt, rescues his patient from an imminent death. Equipped with antitoxine and O'Dwyer's instruments I esteem it a privilege to be called to a case of membranous croup. Aside from the emolument, if there be any, and the gratitude of the parents, which is always abundant, and the increase of reputation, which surely results, there is another cause of gratification in the treatment of these cases; it gives a man a feeling of power over disease and consequently a sense of pride in his profession in a great degree.

Society Reports.

CLINICAL SOCIETY OF MARYLAND.

MEETING HELD NOVEMBER 20, 1896.

THE 328th regular meeting of the Clinical Society of Maryland, Dr. S. K. Merrick, President, in the chair.

The following new members were elected: Drs. Jno. J. Abel, J. C. Bloodgood, J. G. Clark, Claribel Cone, T. S. Cullen, Henry B. Jacobs, Sylvan H. Likes, G. N. Linthicum, J. C. Morfit, Henry Page, Stewart Paton, W. M. Pearce, O. G. Ramsey, W. W. Russell, Mary Sherwood and Lilian Welsh.

Dr. Harry Friedenwald read a paper on OSTEOMATA OF THE AUDITORY CANAL.

He said "recent writers regard exostoses in the auditory canal in many cases as periosteal osteomata. They are usually globular or oval in shape and are rarely pedunculated. They are frequently multiple and often bilateral, being symmetrically placed in many of these cases. They are covered with a thin sensitive skin and are usually very hard. In some cases they have been found to be spongy, or even to contain cavities. The seat of these growths is most frequently near the mouth of the osseous auditory canal, more rarely in the deeper portions. The posterior and upper wall is the most frequently affected. When the tumors are multiple they are usually placed opposite to each other. The osteomata of the auditory canal grow slowly in most cases, and after attaining a certain size remain stationary. But in some cases they have developed in a few months. Concerning the cause little is known excepting that heredity plays an important part and that many cases are preceded by catarrhal or suppurative inflammations of the middle ear. The symptoms produced are very slight until the tumor, or the tumors, attain a large size. They become serious when they cause accumulations of wax, or pus, behind them. As long as there is some free space left in the caliber of the auditory canal the hearing is not impaired, but if the canals become en-

tirely closed either by the tumors themselves or by accumulating serum or pus the impairment of hearing may be very great. In the last mentioned case the gravity of these tumors becomes most apparent for retention of pus may occur with all its necessary consequences. Besides this these tumors at time produce great pain from the pressure of their ulcerated walls upon the canal. Concerning their treatment we should remember that when small and giving rise to no unpleasant symptoms they should not be interfered with, but when they become the cause of deafness, especially bilateral deafness, or when they produce retention of pus, their removal is indicated."

He reported two cases. The first was that of a young man suffering with chronic catarrh of the middle ear who had two exostoses in each auditory canal. They were not large enough to require treatment. "The second case was of a woman aged sixty-six years of age whose left auditory canal was completely closed by a large bony growth. There was great pain and symptoms were presented indicating an accumulation of pus behind the tumor. An operation for the removal of the tumor was performed under chloroform. An incision was made back of the auricle, long enough to release the auricle and the cartilaginous portion of the auditory canal and expose the osseous portion. This was found to be entirely closed near the tumor. The granulation tissue was first scraped away and then it appeared that the growth was attached to the upper and posterior wall of the canal. With a hollow chisel, a few blows only being necessary, we were able to separate the tumor entirely from its base. With a pair of forceps the mass was extracted and the canal was then found to be thoroughly free. The auricle was stitched into its normal position and the canal filled with a sterilized tampon. It would have been impossible to remove the growth through the auditory canal. The patient made a good recovery and was last examined seven months after the examination, when she could hear the watch at four-

teen inches and a low whisper at twenty feet."

Dr. Herbert Harlan: These cases are not very rare. I have seen perhaps five, or six of them where the growth is to the outer part, just about the edge of the cartilaginous and bony portions of the canal. Dalby speaks of those as the exostoses and I would understand from the paper that this case comes under that classification. They do no particular harm unless they close the canal. As I am limited to five minutes I will not enter into the discussion of the case, but relate one of hyperostosis, a more common trouble, that I saw operated upon two years ago. It was a young girl of thirteen who consulted me because of a very profuse and offensive otorrhea. The appearance was like this (drawing), three tumors leaving a very small central orifice. A collection of pus behind them could not be removed by syringing because the opening was so small. I thought the condition exceedingly dangerous and advised an operation. I had constructed some particularly long dental drills with conical points and had an assistant to run the dental engine, but it was exceedingly difficult to make any impression upon the growths. While these new drills will cut through compact bone easily they make little impression upon these bony tumors. I believe they would cut ivory better. I succeeded finally, however, in cutting through one of them. It is difficult to do with the engine what Dr. Friedenwald said, and I subsequently removed the remaining part of this one and one of the others with the chisel and hammer. I happen to have seen this patient within the last week and the case has only been successful to the extent of making her safe and giving a free outlet for the pus. There is still some otorrhea. She syringes the ear once or twice a day and as she hears the watch readily at six inches she is not inclined to submit to any further operation. A radical operation for cure of otorrhea might destroy what hearing she now has, so I have not insisted that another operation be performed.

Dr. Samuel Theobald: I have had the fortune to meet with several cases of exostosis of the auditory canal during the twelve months and one or two of them might be of interest in this connection. In the first place I would say that my experience with the dental drill was very much like that of Dr. Harlan. One of the great difficulties was that the canal soon became filled with blood and it was impossible to see exactly what the drill was doing. It goes ahead with a great deal of vim and accomplishes some execution and it is well to do the work accurately where needed. I found it difficult to satisfy myself that I was confining the action of the drill to the desired point.

One of my cases had exostoses in both ears; in one ear it was more or less pedunculated, while in the other there were two that almost met in the center. I removed the first with the chisel and had little difficulty. In the ear in which there were two, however, I was convinced that nothing could be done without a general anesthetic. I began with the drill and after becoming discouraged, took to the chisel and hammer and succeeded very satisfactorily in removing both exostoses so that there was practically no narrowing of the canal afterwards. I had made for this purpose a little gouge, smaller than those in general use, less concave and square across the end so that there was not the same risk of slipping for I had found that the general ones had a tendency to slip from the base.

I syringe out the ear before and after the operation with a saturated solution of boracic acid and cover the wound with iodoform gauze. In all my cases healing took place without any trouble, though in the one which I have described there was such an extensive chiseling away of bone material that slight suppuration followed.

I do not quite agree with Dr. Friedenwald that these cases are mostly of the ivory character. My experience has been that such cases are the exception. My cases were mostly made up of cancellous bony tissue.

Dr. Friedenwald: In reply to what

Dr. Theobald has said concerning the relative frequency of the very hard osteomata of the auditory canal I desire to explain that my statement is not based upon personal experience but upon the best authorities who have written upon this subject; thus Steinbrugge (in his chapter on the pathology of the ear in Orth's work on pathology) says that the hard exostoses are the most common, that spongy forms are much rarer and that those containing cysts are very seldom seen.

Dr. R. L. Randolph read a paper entitled PANOPHTHALMITIS OF OBSCURE ORIGIN IN AN INFANT NINE MONTHS OF AGE.

"A year ago I was called to see a baby girl nine months old. A week previously the family physician had seen the child for a cold and noticing that it had slightly inflamed eyes had prescribed a boric acid wash and had given the matter no further thought. At the end of the week his attention was again attracted to the eye and he observed for the first time a whitish deposit in the pupillary field and concluding that the trouble was something more than conjunctivitis requested me to see the child. The infant was a strong healthy one, seemingly in no pain and easily diverted by its playthings. The child had no fever, but I noticed that there was a slight coryza showing itself in running at the nose and some little catarrh of the upper part of the bronchial tubes. The affected eye was uniformly congested. The cornea was perfectly clear, the pupil much contracted and its area filled with a grayish exudate. There was also a deposit of this exudate on the floor of the anterior chamber. The tension of the eye was slightly below the normal and the eyeball did not seem sensitive to the touch. There was no history of a blow. The usual remedies were tried, such as strong solution of atropine and hot douches, and, at Dr. Theobald's suggestion, small doses of gray powder were given, and inunctions of mercury were used. Nothing, however, availed to stop the progress of the disease, which went on developing into

panophthalmitis in its most typical form. On the 14th day the eye was protruding and the lids were edematous. The suffering at this stage was evidently considerable and at one time I had determined to open the eyeball and let out the pus, but when I came, prepared to operate, I found that the eye had burst at a point just between the cornea and the insertion of the external rectus muscle. The eyeball at present is two-thirds the size of its fellow."

Dr. Hiram Woods: There is very little to add to what Dr. Randolph has said of this singular case. He has described the clinical features of panophthalmitis that were followed in this case typically. The case would seem to be a panophthalmitis extending from suppurating choroiditis. He speaks of the tension being minus when he first saw the case and it might be interesting to know whether there is anything in the past life of the child from which a metastatic choroiditis could arise. The minus tension would indicate that the case was not as acute as supposed. I have seen a number of cases following meningitis, and I recall one seen in Waverly in which the child's eye remained in the same condition for some time and then underwent phthisis bulbi. These troubles, when they do not come from infection, either post-operative or through corneal wounds, are usually due to some of the infectious diseases. The greatest in this case lies in its cause and the history, it would seem, may have to be studied previous to the time when Dr. Randolph saw it.

Dr. R. L. Randolph: In reply to Dr. Woods, I may say that the child's life had been exceptionally free of sickness. Panophthalmitis following penetrating wounds of the eyeball is not an infrequent occurrence and it is also seen as a result of some one of the exanthemata and of cerebro-spinal meningitis, but we have in this case an instance of the disease apparently not associated with a constitutional affection and an injury I think can be absolutely excluded. It may be remembered that I spoke of the child having catarrh. It is possible that the child was suffering with "grippe,"

which to my mind is clearly a disease of bacterial origin. This being the case it might easily have happened that an infected embolus formed in one of the vessels of the retina or choroid which, if true, would easily explain the panophthalmitis. The organism was undoubtedly at the last present in great numbers, as the swelling of the eyeball and its surroundings was enormous, as might be inferred from the fact that the eye ruptured.

Dr. Harry Friedenwald: It is interesting at times to see what relatively unimportant things may cause panophthalmitis. Kniess says that it may arise from furuncles. We had a case at the hospital sometime ago in which the only probable cause was a chronic urethritis.

Dr. Herbert Harlan: I might mention a singular case I saw some years ago. The patient was a frail, sickly girl, who had had some iritis, corneal opacities, etc. She had very poor vision and I suggested that a new pupil made by iridectomy might perhaps improve her vision. She came for the operation, but being very busy that day I postponed it. The next day she appeared with a violent inflammation of the eye and in two or three days had a complete panophthalmitis, and the eye went on to complete destruction. I never learned the origin of the trouble, but I congratulated myself that I had not operated on that particular day.

Dr. Wm. T. Watson read a paper on PERSONAL EXPERIENCE WITH LARYNGEAL DIPHTHERIA. (See page 241.)

Dr. J. W. Chambers: I am expected to open the discussion, but there is scarcely anything left to be said after the excellent paper of Dr. Watson's. I will simply make a few remarks about intubation. This is a comparatively new operation in croup and while it does not completely take the place of tracheotomy, it will replace that operation in children under six years of age. It is an operation, as Dr. Watson has said, that ought to be done by the general practitioner. It is scarcely more difficult than the ordinary catheterization. Everyone would expect the practitioner

to be able to do that, and the time is coming when he will also be expected to do intubations. It goes with antitoxine and he must be able to use both. It is an operation that has but few dangers. I think of but one at present and that is the possibility of forcing the membrane down the tube and plugging it up. That necessitates the removal of the tube at once. I have had such an accident occur twice; one patient died on the table and on opening the trachea we found it filled with membrane. The other child lived a few hours, but came near dying on the table, due to the fact that a small piece of membrane was caught in the tube. I saw one case in which the tube became plugged by two lumbricoid worms. The child suddenly sprang up in bed, showed want of air and the tube was removed, but it is a question whether this accident should be charged to the tube.

In children beyond six years of age I do not believe intubation is equal to tracheotomy. The oldest child I intubated was thirteen, and it died. I should have done a tracheotomy, but the parents objected to intubation; the next best thing was done. He had been sick for some time and had antitoxine, but there were symptoms that made me prefer tracheotomy to intubation.

Intubation may be done by one who is not a specialist and not particularly skilled in the use of instruments. If he can find the upper end of the larynx he can introduce a tube. I have once or twice had some difficulty in extracting the tube but such occasions are the exception and every general practitioner ought to be prepared to do this operation. I would like to add one word about antitoxine. Most of us, as Dr. Watson has suggested, give it in too small doses. I am sure I have seen cases lost because the patient did not get a sufficient dose. I should not hesitate to give two or three pretty large doses. The question is not usually how much, but whether it is a pure antitoxine.

Dr. F. D. Sanger: Dr. Watson is to be congratulated upon the results he obtained. One of his cases was certainly a resurrection and I think the case that

lived in Gardenville, or some place distant from his office, should be congratulated that it did live that far away because it lead to his intubating somewhat earlier than he otherwise would have done. The object of intubation is to give rest. There is no more exhaustive a thing than dyspnea and there are few more exhaustive diseases than diphtheria. The two are hard to endure.

It is unjust to compare intubation with tracheotomy except in cases over thirteen years of age. Tracheotomy has been considered as a *dernier ressort*. Intubation is not. Dr. Watson's success has been largely due to his close attention to his patients and early intubation. In regard to obstruction of the tube I had an experience of that kind some years ago. Dr. Chambers was out of town and I was called to one of his cases. I was not prepared at the first visit to intubate and when I saw it a few hours later the dyspnea had markedly increased. I intubated that child, but some membrane plugged the tube and it had to be removed. This occurred the second time and by the time I had introduced the tube the third time the child was dead in its mother's arms. Had I intubated when I first saw it in the morning the chances of saving that life would have been very much better. It is an easy operation, as has been said, that can be performed by the general practitioner and valuable time should not be lost in sending for a specialist. The object is to secure rest and it should be secured early.

H. O. REIK, M. D.,
Secretary.

WALKING DIPHTHERIA. — Dr. E. B. Gleason reports in the *Medical Council* several cases of diphtheria in persons so slightly ill that they walked about, thus spreading contagion. He thinks that such cases will always be a menace to the public health as they occur more frequently than is usually supposed and the impossibility of quarantining such individuals is evident. Cases may also be chronicled where the Klebs-Loeffler bacillus is always present. Health Boards can effect nothing in these cases.

MARYLAND Medical Journal.

PUBLISHED WEEKLY.

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MARYLAND MEDICAL JOURNAL.

209 Park Ave., Baltimore, Md.

WASHINGTON OFFICE:
913 F Street, N. W.

BALTIMORE, JANUARY 16, 1897.

THE renewed interest in the Library of the Medical and Chirurgical Faculty by recent endowments still continues. The Book and Journal Club, which supplements the work of the library committee by supplying many new books and journals, at its meeting last Wednesday night reported progress and not only showed itself to be in a flourishing condition, but proved its popularity by the large attendance.

It is of interest in this connection to note this little bit of history of the Faculty library which was recently unearthed by Dr. Harry Friedenwald, a member of the Library Committee and the Secretary of the Book and Journal Club. He lately came upon the following note which appeared in the first volume of the *Maryland Medical and Surgical Journal*, (page 400) published in 1840 under the auspices of the Medical and Chirurgical Faculty:

"In the year 1799, the Legislature of Maryland granted a charter, incorporating 'The Medical and Chirurgical Faculty of Mary-

land.' The end of the charter was to encourage the cultivation of a high grade of medical and surgical knowledge. It required persons before beginning the practice of medicine and surgery in Maryland, after a specified day, to apply to the Faculty for license to practice. It directed an election, annually, of a Board of Examiners, consisting of well-educated physicians and surgeons, to examine candidates, and, if they were found competent, to grant them licenses. For the purpose of raising a fund for the diffusion of medical and surgical knowledge, each licensee, on receiving his credentials, was required to pay a fee of not more than ten dollars to the treasurer of the corporation.

"The fees placed in the treasury amounted, after thirty years, to several thousand dollars, nearly all of which had been invested in bank stock. At the annual convention it was often a question for general conversation: 'How ought the funds to be used, so as to answer the end of the charter?' At length, at the convention of 1830, the late Professor Samuel Baker introduced a resolution for making an appropriation of five hundred dollars for the purchase of books, to be kept in a suitable place, under the direction of a committee, for the use of the members of the Faculty. The convention being well attended, the resolution was thoroughly discussed; and, to the gratification of its friends, it met with no opposition that did not finally yield to a conviction of the practicability and usefulness of the proposed measure. The resolution was triumphantly carried; and thus was laid the foundation of a library, which has since, by a continuance of annual appropriations out of the dividends from the bank stock, gradually become a very valuable collection of ancient and modern writings.

"The shelves of the library now contain the time-honored volumes of Hippocrates, Aretaeus, Aetius, Paulus, Orisbasius, Actuarius, Celsus, Scribonius, Marcellus and other diligent and hardy pioneers; besides the labors of many of their successors of various nations and of successive eras; including the enlightening researches of our own day. The existence of such a collection, as the catalogue of this library announces to be at the command of the members of the corporation throughout the State, is one of the results of care with which the Faculty has endeavored to use its funds, wisely, for a

permanent diffusion of medical and surgical knowledge.

"The object of publishing this notice is, to intimate to all whom the advancement of science may concern, that, as the library fund is needed for the purchase of modern books chiefly, the hope of being able to enlarge the collection of old authors is founded on the supposition that there are many owners of old volumes and pamphlets in Maryland and perhaps elsewhere, who may be disposed to transfer to this institution the responsibility of the safe-keeping of these remains of ancient times.

"Samuel Chew, M. D., Librarian, No. 88 North Howard Street, will receive and catalogue all donations to the library.—John Fonerden, Chairman of the Board of Library Directors."

This is an extremely interesting bit of history and well worthy of record. There is one mysterious part in the history of the Faculty and that is the disappearance of its small capital. At one time the Faculty had accumulated some money and owned a building, but bad management and other causes soon dissipated the small endowment.

It is fortunate now that the present endowment is so well arranged. Interest in the new building, however, should not be allowed to die out.

MUCH has been said of diet kitchens and cookery schools in late years of training in the preparation of dainties
A Bureau of Diets. as a part of the curriculum of hospital training schools, but the doctor is still compelled to trust to luck in regard to the nourishment of his invalid or convalescent patients and to limit the diet of the desperately ill to a monotonous round of two or three standards which can be bought at the dairy or drug store.

If he desires rectal alimentation for his patient he is dependent upon unskilled persons for the preparations used and cannot therefore venture on the more scientific aliments used with so much benefit by the great foreign teachers and writers; and the patient, who might be nourished thus for many weeks, sinks for lack of these therapeutic resources in a few days.

The specialist in stomach and intestinal diseases finds himself unable to apply the diets which are essential to his studies and

cures. He calls to his aid in turn the patient's cook, the druggist, the manufacturing pharmacist, and finds that he has simply wasted his time and obtained nothing satisfactory. They are skillful; but it is not in their line of work.

If a diabetic, gouty, or other such patient is to be dieted, the physician is met at the beginning by the difficulty of securing bonafide, palatable gluten or other breads of low starch percentage, or the patient buys them of various sellers with starch percentages unknown to the physician. Some of these "gluten" breads have more starch than ordinary table bread and some have had an undetermined amount of the forbidden sugar or molasses added to them. In regard to vegetables, meat, etc., for the diabetic the physician must spend hours in explaining to the caretaker what shall not be given, a knowledge of the current market not being within his reach.

In order to meet all these dietary and therapeutic needs a graduate of diet training from one of the leading hospitals of our country has opened a Medical and Family Bureau of Diets for the Sick and Dainties for Invalids at 525 North Charles Street, Baltimore. Here may be obtained broths, peptonized and otherwise, jellies, fresh meat juices, dietetic breads, convalescents' beverages, tempting custards and special milk preparations. Special prescriptions for diet will be filled here just as those for medicines are filled by the druggist, in the same professional confidence. Organo-therapy will now be possible strictly in accord with physicians' directions. So too with rectal alimentation when ordered by the doctor. Patients needing diabetic or other special diet courses may be referred here for lists of available dishes in market and simple advice for preparing those not made in the Bureau.

The Bureau is wholly independent of any other control than that of its founder and has been established with the cordial approval of a number of respected physicians and specialists in this city.

Articles furnished will be sent to any point in city or country, daintily served or ready for simple preparation. The great want for just such a bureau as this and the necessity of bringing its existence to the notice of all physicians has prompted this extended notice.

Medical Items.

We are indebted to the Health Department of Baltimore for the following statement of cases and deaths reported for the week ending January 9, 1897.

Diseases.	Cases Reported	Deaths.
Smallpox.....		
Pneumonia.....		20
Plithisis Pulmonalis.....		22
Measles.....		
Whooping Cough.....	5	
Pseudo-membranous Croup and Diphtheria. }	27	9
Mumps.....	1	
Scarlet fever.....	32	1
Varioloid.....		
Varicella.....	3	
Typhoid fever.....	4	3

Sir Joseph Lister has been made a peer.

The Baltimore Health Department mortality list is in sad need of revision.

The Massachusetts General Hospital has inherited a valuable tract of land in Brookline.

Dr. J. McPherson Scott has succeeded Dr. T. W. Simmons as health officer of Hagerstown.

The Hospital for Consumptives of Maryland elected directors at its annual meeting last Monday.

The maternity ward of the Johns Hopkins Hospital is now open. Only patients unable to pay a physician are received.

The Thorndike Prize at the Harvard Medical School was not awarded this year because no essay came up to the standard.

The physicians of Louisville who were compelled to pay an income tax have brought suit and the courts have decided that they need not pay the tax.

The fund of five thousand dollars for a memorial to Dr. Wilhelm Meyer, the discoverer of the treatment of adenoid vegetations of the pharynx, is sufficiently large.

Mayor Hooper of Baltimore has acted wisely when he put Drs. Charles C. Bombaugh, Lilian Welsh, John T. King, Frank C. Bressler and A. Friedenwald on the School Board.

Dr. Gilles de la Tourette has been appointed physician-in-chief to the Paris Exposition, to be held in 1900. There will be an exhibit of objects illustrating the progress of medicine and surgery.

The State Board of Health is completing plans for the State Sanitary Congress to be held in Baltimore. Many of the county health officers have shown a willingness to attend the meeting at their own expense.

Theodore Wormley, M. D., Ph. D., LL. D., Professor of Chemistry in the University of Pennsylvania, died in Philadelphia last week. Dr. Wormley was graduated from the Philadelphia College of Medicine and Surgery in 1849.

Philadelphia has suffered a loss in the death of Dr. William H. Pancoast, son of the distinguished surgeon Joseph Pancoast. Dr. Pancoast was born in Philadelphia in 1835 and was graduated from the Jefferson Medical College in 1856. He was formerly a professor in his alma mater.

The Baltimore Journal Club of the Faculty held its annual meeting last Wednesday night at the Hall of the Faculty. After a statement of the year's work by the President, Dr. Osler, and a financial statement by the Treasurer, reports of progress in various departments were made.

The death is announced of Dr. Samuel Boyle of Baltimore, in his sixty-fifth year. Dr. Boyle was graduated at Edinburgh in 1866 and had been in this country for about thirty years. He was a volunteer physician during the yellow fever epidemic in the South and received the thanks of Congress, with extra pay.

The Nurses' Directory, 847 North Eutaw Street, Baltimore, controlled by the Medical and Chirurgical Faculty, has now sixty graduate nurses registered. There is no fee charged the patient, the nurse paying one dollar for each case. Physicians may send for any special nurse, and can obtain nurses at any hour of the day or night. There being a long distance telephone in the building, physicians out of the city can communicate directly with the Directory. If the profession will always engage nurses through the Directory and see that their own nurses are registered, they will contribute greatly to the success of the Directory and to the funds of the Library.

Book Reviews.

THE PRACTICE OF MEDICINE. By Horatio C. Wood, A. M., M. D., LL.D. (Yale), Professor of Therapeutics and Clinical Professor of Nervous Diseases in the University of Pennsylvania, and Reginald H. Fitz, A. M., M. D., Hersey Professor of the Theory and Practice of Physic in Harvard University. 8vo, Pp. x, 1071. Philadelphia: J. B. Lippincott Company, 1897.

The fact that Osler's Practice of Medicine has enjoyed a monopoly of late has induced other writers to put out books which shall be satisfactory to physician and undergraduate. The combination of Wood and Fitz can not help being good. Dr. Wood deals with the therapeutics and nervous system and a few other parts, while Dr. Fitz writes the rest. There is no especial note to be made of this work as it gives one the impression of hasty composition; it is nevertheless very comprehensive. Much of good in the book is marred by poor print and cheap, thin paper used with a view of making the book thin. The work of two such men will undoubtedly attract attention.

The first number of Charles Wood Fassett's *American Medical Journalist* appears with an excellent likeness of Dr. John B. Hamilton on the cover, backed by a young woman on the frontispiece. The make-up of this number is very attractive and the beautiful clear type very dainty. The subject-matter is well chosen and varied and the whole number is full of interest. The field, however, seems rather limited. The cover page is unique but not especially artistic. The writers are principally from St. Louis. Mr. Fassett is to be congratulated on his enterprise.

Lea Brothers and Co., of Philadelphia, announce The American System of Medicine in four volumes, edited by the late Dr. A. L. Loomis and Dr. W. Gilman Thompson. Volume I is almost ready. It is for sale by subscription only at \$5, \$6 and \$7 a volume, according to the binding. Among the contributors are Drs. I. E. Atkinson, Thomas S. Latimer, F. T. Miles, William Osler, William S. Thayer, Wm. H. Welch of Baltimore, and W. W. Johnston and Surgeon General George M. Sternberg of Washington. The first volume is almost ready and the others will follow soon.

Current Editorial Comment.

EXPERT TESTIMONY.

New England Medical Monthly.

FEW regular physicians in good standing are guilty of gross errors or neglect, and it often occurs that there is something more than a feeling of injury which prompts the suit. It is a sad commentary upon our calling, however, that professional jealousy may ever attain to such vindictiveness and it is an even greater reproach that prominent men can be induced, on such occasions, to go upon the witness stand and in a few well chosen words blast the reputation of brother physicians, who may even be personally unknown to them.

MEDICAL ADVERTISING.

Western Medical Review.

SOCIETY has a claim on every man, and by the doctor attending to his social duties he will probably impress someone with the idea that he will be a good physician to call in when he becomes ill. By making himself agreeable to all whom he may meet, without overdoing it; by dressing neatly and being cleanly; by driving a good horse and buggy if he can afford it; by being a gentleman at all times, in all places, and under all circumstances—these are legitimate and honorable methods of advertising. It is advertising that costs nothing, but it is advertising that pays. The conscientious physician, the honorable physician, the self-respecting physician, will advertise in this way and no other.

BAD BILLS.

Medical Record.

As an offset to the generally acknowledged abilities of the physician in every other line of his work, it is also quite universally admitted that he is entirely deficient in business tact. Whether or not he is willing to accept such a verdict from his patients, he is nevertheless at certain seasons, when bills are sent to his otherwise grateful debtors, aware of a glaring fact that there is a marked difference between actually earning his money and in being promptly paid. Often content with the sentimental side of apparent appreciation of services rendered to his patrons, of lives saved, of suffering assuaged and of health restored, he is too easily satisfied with the reflection that he has a very noble profession but a very poor trade.

Publishers' Department.**Convention Calendar.****BALTIMORE.**

- BALTIMORE MEDICAL ASSOCIATION**, 847 N. Eutaw St. Meets 2d and 4th Mondays of each month.
- BOOK AND JOURNAL CLUB OF THE FACULTY**. Meets 2d and 4th Wednesdays, 8 P. M.
- CLINICAL SOCIETY**, 847 N. Eutaw St. Meets 1st and 3d Fridays—October to June—8.30 P. M. S. K. MERRICK, M. D., President. H. O. REIK, M. D., Secretary.
- GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE**, 847 N. Eutaw St. Meets 2d Tuesday of each month—October to May (inclusive)—8.30 P. M. WILMER BRINTON, M. D., President. W. W. RUSSELL, M. D., Secretary.
- MEDICAL AND SURGICAL SOCIETY OF BALTIMORE**, 847 N. Eutaw St. Meets 2d and 4th Thursdays of each month—October to June—8.30 P. M. W. S. GARDNER, M. D., President. CHAS. F. BLAKE, M. D., Corresponding Secretary.
- MEDICAL JOURNAL CLUB**. Every other Saturday, 8 P. M. 847 N. Eutaw St.
- THE JOHNS HOPKINS HOSPITAL HISTORICAL CLUB**. Meets 2d Mondays of each month at 8 P. M.
- THE JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY**. Meets 1st and 3d Mondays, 8 P. M.
- THE JOHNS HOPKINS HOSPITAL JOURNAL CLUB**. Meets 4th Monday, at 8.15 P. M.
- MEDICAL SOCIETY OF WOMAN'S MEDICAL COLLEGE**. SUE RADCLIFF, M. D., President. LOUISE ERICH, M. D., Corresponding Secretary. Meets 1st Tuesday in the Month.
- UNIVERSITY OF MARYLAND MEDICAL SOCIETY**. Meets 3d Tuesday in each month. 8.30 P. M. HIRAM WOODS, JR., M. D., President, dent. E. E. GIBBONS, M. D., Secretary.

WASHINGTON.

- CLINICO-PATHOLOGICAL SOCIETY**. Meets at members' houses, 1st and 3d Tuesdays in each month. HENRY B. DEALE, M. D., President. R. M. ELLYSON, M. D., Corresponding Secretary. R. H. HOLDEN, M. D., Recording Secretary.
- MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA**. Meets 2d Monday each month at members' offices. FRANCIS B. BISHOP, M. D., President. LLEWELLYN ELIOT, M. D., Secretary and Treasurer.
- MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA**. Meets Georgetown University Law Building 1st Tuesday in April and October. W. P. CARR, M. D., President. J. R. WELLINGTON, M. D., Secretary.
- MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**. Meets Wednesday, 8 P. M. Georgetown University Law Building. S. C. BUSEY, M. D., President. S. S. ADAMS, M. D., Recording Secretary.
- WOMAN'S CLINIC**. Meets at 1833 14th Street, N. W., bi-monthly. 1st Saturday Evenings. MRS. M. H. ANDERSON, 1st Vice-President. MRS. MARY F. CASE, Secretary.
- WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY**. Meets 1st and 3d Fridays of each month at members' offices. GEORGE BYRD HARRISON, M. D., President. W. S. BOWEN, M. D., Corresponding Secretary.

PROGRESS IN MEDICAL SCIENCE.

AMONG the handsome and artistic catalogues for 1897 is the one issued by the Columbus Phaeton Company, entitled "A Story of Some Phaetons." This catalogue, like the products of the Columbus Phaeton Co's. factory, is the result of painstaking effort, good-judgment, artistic pride and thoroughness in detail. Copies are sent physicians for the asking.

ANTITOXINE.—The use of such strong applications as the undiluted tinct. ferri chlor. and the argent nit. I most emphatically condemn, believing that they do positive harm. Diphtheria is a systemic as much as it is a local disease, and the treatment therefor should be both local and systematic, and I believe that in the serum therapy we have a remedy which, if used early in the disease, will prove itself almost, if not entirely, a specific. So thoroughly am I convinced of its efficiency that I keep constantly on hand a supply. The only serum I have used is prepared by H. K. Mulford Company, Philadelphia, Pa.—R. B. HOPKINS, M. D., Milton, Del.

THE UNTOWARD EFFECT OF SUBSTITUTES.—A. M. Collins, A. M., M. D., of Shelbyville, Ills., writes under date of November 2, 1896: "I never realized the vast difference between genuine Antikamnia and the various substitutes that are being palmed off, until within the past few days; and the realization was all the more pronounced because I myself was the patient. For four weeks I had been suffering with neuralgia of a very severe type and attended with considerable febrile movement. I tried the various compounds and other preparations, lauded as 'just as good' but with no real advantage and with no little heart disturbance. On Saturday, I went to Arcola, and while there was taken very sick with one of my neuralgic attacks. I sent to the drug store for some genuine Antikamnia and to be certain about it, procured an unbroken original package. I took it in eight to ten grain doses at intervals of two hours. The effect was magical; the first dose relieved the severity of the pain, while the second quieted it entirely, and I went to bed, sleeping all night with one awakening of a few moments only, a thing I had not done in four weeks."

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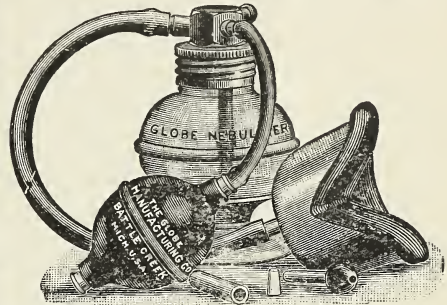
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This Elixir is prepared from the Chemically Pure Salts. Results can be looked for from its administration that could not possibly be expected from the Commercial Salts. **FORMULA**—Each fluid drachm contains Arsenical Iodidum 1-125 grain, Ferri Iodidum 1-12 grain, Hydrargyri Iodidum 1-125 grain, Manganesi Iodidum 1-10 grain, Potassii Iodidum one grain, Sodii Iodidum one grain, with Aromatics. **MEDICAL PROPERTIES**—The greatest value of this combination is it relieves those obscure and chronic obstructions to gland action—the kidney, liver, pancreas, as well as the lymphatic system, which may exert so great an influence for evil on the economy. It enjoys the confidence of the Medical Profession, as its use is indicated in a wide range of diseases, particularly so in pernicious anæmia, skin diseases, both scaly and papular; has remarkable curative effects in specific diseases and other manifestations of systemic infection, chronic, uterine, and pelvic diseases, and in complaints where an alterative and tonic is indicated.

This combination proves that the united action of remedies is often requisite when, either, alone, is insufficient. Physicians, when prescribing, will please write: Iodidi Elix. Sex. (WALKER-GREEN'S).—One bottle.

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PROGRESS IN MEDICAL SCIENCE.

W. C. FREDERICK, M. D., Lono, Ark., says: I have used S. H. Kennedy's Extract of *Pinus Canadensis* (dark), one to three of water, in sore throat from cold, with splendid results, and have now under treatment a little boy, three years old, suffering from strumous diathesis, who had been afflicted over a year with otorrhea. Have been using as an injection two drachms of S. H. Kennedy's Extract of *Pinus Canadensis* to four drachms of water, three to five drops, two or three times a day, the ear previously cleansed with castile soap. The little fellow commenced to improve from the very start and is rapidly improving daily; the discharge has almost ceased. He has been on this treatment for about two weeks.

ACUTE ARTICULAR RHEUMATISM.—Dr. Max Olmy publishes in No. 12 of the *Therapeutische Monatshefte* on pages 676 to 77 the results obtained in a series of experiments with Phenocoll Hydrochlorate, entitled "Phenocoll Hydrochlorate in Acute Articular Rheumatism." The remedy was used at the Clinic at Halle, Germany, in sixteen cases of acute articular rheumatism in single doses of fifteen grains, 45 grains per day. The writer was very well pleased with its prompt action. In three cases the remedy failed; in all other cases, some of which had been treated without success with sodium salicylate, it reacted promptly. In cases of recent standing the pain diminished after taking 9 grammes, and complete recovery occurred after taking 21 grammes. The average time of treatment was thirty days. In recurring cases on an average 25 grammes of Phenocoll were required and treatment lasted 33 days. Of salicylate of sodium, however, it was necessary to prescribe 41 grammes in daily doses of 6 grammes, and if only four grammes per day were taken, 49 grammes were required to relieve the pain. Better results were, therefore, obtained with Phenocoll Hydrochlorate than with salicylate of sodium. The influence of the remedy on the temperature is quite variable. Temperature becomes normal as soon as the affection of the joints has disappeared. Considerable perspiration was observed with weak patients; other side-effects such as cyanosis, collapse, etc., were never noticed.

THE THERAPY OF PETROLEUM OIL.—It is surprising that petroleum oil, with its positive antiseptic power, stimulant, antispasmodic, diaphoretic and expectorant properties, should not find more extensive use in medicine than is given to it. The great popular reputation which it enjoys as a healing agent for both internal and external use is well known. For anyone to assert that petroleum oil possesses no therapeutic power is simply to make an assertion of ignorance, for petroleum, or rock oil, as it is sometimes called, is, it is well-known to those who have paid attention to the subject, used with the most beneficial results in all chronic bronchial and pulmonary disorders. The greatest objection to its use has heretofore been the difficulty of preparing it in palatable form to make it acceptable to invalids, children, or to one with a weak and delicate stomach. As is well-known, an emulsion of any oil is preferable to the plain oil, because it represents the oil in a partially digested condition which makes it easy of assimilation and saves an immense amount of work to the digestive organs. The Angier Chemical Company of Boston has succeeded in producing just such a preparation as this—a perfect emulsion of a selected petroleum oil purified by their peculiar process. But they have done more than this:—they have combined with it the well-known hypophosphites. We have then in this preparation, studied simply from the therapeutic standpoint, a remedy which is a tissue builder, one which is especially adapted to the healing of inflamed mucous surfaces and one also which contains a tonic to the nervous system. When we study the therapeutics of Angier's Petroleum Emulsion we are made aware of the large number of diseases of the respiratory mucous tract cured by it and of the continued reports from physicians from every quarter favorable to its use.

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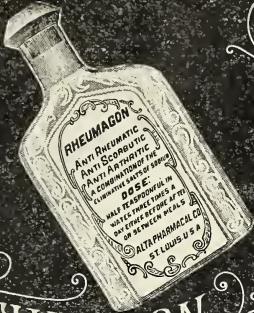
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SKIN DISEASES
DUST OVER SURFACE,
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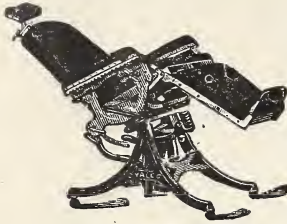


Fig. V—Semi-Reclining.

- 9th. The leg and foot rests folded out of the operator's way at any time—Figs. XI, XV and XVII.
- 10th. Head Rest universal in adjustment, with a range of from 14 inches above seat to 12 inches above back of chair, furnishing a perfect support in Dorsal or Sim's position.—Figs. XIII and XV.
- 11th. Affording unlimited modifications of positions.
- 12th. Stability and firmness while being raised and rotated.
- 13th. Only successful Dorsal position *without moving patient*.
- 14th. Broad turntable upon which to rotate the chair, which cannot be bent or twisted.
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- 1st. Raised by foot and lowered by automatic device.—Fig. I.
- 2nd. Raising and lowering without revolving the upper part of the chair.—Fig. VII.
- 3rd. Obtaining height of 39½ inches.—Fig. VII.
- 4th. As strong in the highest, as when in the lowest position.—Fig. VII.
- 5th. Raised, lowered, tilted or rotated without disturbing patient.
- 6th. Heavy steel springs to balance the chair.
- 7th. Arm Rests not dependent on the back for support.—Fig. VII—always ready for use; pushed back when using stirrups—Fig. XVII—may be placed at and away from side of chair, forming a side table for Sim's position.—Fig. XIII.
- 8th. Quickest and easiest operated and most substantial' secured in positions.



Fig. XVII—Dorsal Position.

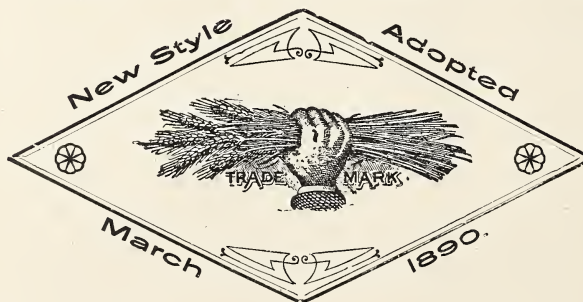
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The special indication of this combination of Phosphates in Spinal Affections, Caries, Necrosis, Ununited Fractures, Marasmus, Poorly Developed Children, Retarded Dentition, Alcohol, Opium and Tobacco Habit, Gestation and Lactation to promote Development, etc., and as a physiological restorative in Sexual Debility and all used conditions of the Nervous System should receive the careful attention of good therapeutists.

Notable Properties: As reliable in Dyspepsia as Quinine in Ague. Secures the largest percentage of Benefit in Consumption and All Wasting Diseases, "by determining the perfect digestion and assimilation of food." When using it, Cod Liver Oil may be taken without repugnance. It renders success possible in treating chronic diseases of Women and Children, who take it with pleasure for prolonged periods, a factor essential to maintain the good will of the patient. Being a Tissue Constructive, it is the best "general utility compound" for Tonic Restorative purposes we have, no mischievous effects resulting from exhibiting it in any possible morbid condition of the system. Phosphates being a natural food product, no substitute will do their work in the system.

DOSE—For an adult, one tablespoonful three times a day, after eating; from seven to twelve years of age, one dessertspoonful; from two to seven, one teaspoonful; for infants, from five to twenty drops, according to age.

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MEDICAL DEPARTMENT OF THE WESTERN UNIVERSITY OF PENNSYLVANIA.

Sessions 1896-1897.

The REGULAR SESSION begins on third Tuesday of September, 1896, and continues six months. During this session, in addition to four Didactic Lectures, two or three hours are daily allotted to Clinical Instruction. Attendance upon four regular courses of Lectures is requisite for graduation. A four years' graded course is provided. The SPRING SESSION embraces recitations, clinical lectures and exercises, and didactic lectures on special subjects; this session begins the second Tuesday in April, 1897, and continues ten weeks.

The laboratories are open during the collegiate year for instruction in chemistry, microscopy, practical demonstrations in medical and surgical pathology, and lessons in normal histology. Special importance attaches to "the superior clinical advantages possessed by this College." For particulars, see annual announcement and catalogue, for which address the Secretary of the Faculty, PROF. T. M. T. MCKENNAN, 810 Aenn Ave., Pittsburgh, Pa. Business correspondence should be addressed to PROF. W. J. ASDALE, 5523 Ellsworth Pve., Pittsburgh, Pa.

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